

Supplemental Digital Content 3. Risk of bias assessment – Nonrandomized comparative studies, assessment of remaining biases, quality, and overall risk of bias

Study, Year, PMID	Blinding of Participants	Blinding of Personnel/ Care Providers	Blinding of Outcome Assessors (Objective Outcomes)	Blinding of Outcome Assessors (Subjective Outcomes)	Incomplete Outcome Data	Selective Outcome Reporting	Other Bias	Eligibility Criteria Prespecified and Clearly Described	Intervention Clearly Described and Consistently Delivered	Outcomes Prespecified, Clearly Defined, Valid, Reliable, and Consistently Assessed	Overall RoB
Abedi, 2016, 25003437	Unclear	Unclear	High	N/A	Low	Low	Low	No	Yes	Yes	High
Brito, 2020, No PMID	High	High	High	Low	Low	Low	Low	Yes	Yes	Yes	High
Carramaschi, 1989, 2602589	Low	Low	Low	N/A	Low	Low	Low	Yes	Yes	Unclear	High
Chetta, 2017, 28002254	High	High	Unclear	N/A	Low	Low	Low	Yes	Yes	Yes	High
Dauplat, 2021, 33622886	High	High	N/A	High	Low	Low	Low	Yes	Yes	Yes	Moderate
de Araujo, 2016, 27673527	High	High	Unclear	N/A	Low	Low	Low	Yes	Yes	Yes	High
Eltahir, 2015, 25539295	High	Unclear	N/A	Unclear	Low	Low	Low	Yes	Yes	Yes	Moderate
Fischer, 2013, 23629074	High	High	Low	N/A	Low	Low	Low	Yes	Yes	Yes	High
Fischer, 2014, 24916480	High	High	Low	N/A	Low	Low	Low	Yes	Yes	Yes	High
Fischer, 2015, 26366550	High	High	Low	N/A	Low	Low	Low	Yes	Yes	Yes	High
Garbay, 1992, 1624727	High	High	N/A	High	Low	Low	Low	No	No	Yes	High
Garvey, 2012, 23096600	High	High	High	N/A	Low	Low	Low	Yes	Unclear	Yes	Moderate
Ha, 2020, 32000718	High	High	Unclear	N/A	Low	Low	Low	Yes	Yes	Yes	High
Hangge, 2019, 31606126	High	High	Unclear	N/A	Low	Low	Low	Yes	Yes	Yes	High

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Jiang, 2013, 24349366	High	High	Low	N/A	Low	Low	Low	Yes	Yes	Yes	High
Kouwenberg, 2019, 30270015	High	High	N/A	High	Low	Low	Low	Yes	Yes	Yes	Moderate
Kouwenberg, 2020, 32590633	High	High	High	High	Unclear	Low	Low	Yes	Unclear	Yes	Moderate
Kulkarni, 2017, 28713853	High	High	High	High	Unclear	Low	Low	Yes	Yes	Yes	Moderate
Laporta, 2017, 28061518	High	High	Unclear	N/A	Low	Low	Low	Yes	Yes	Yes	High
Lei, 2020, 32481367	High	High	High	N/A	Low	Low	Low	Yes	Yes	Yes	Moderate
Liu, 2014, 24558063	High	High	Unclear	N/A	Low	Low	Low	Yes	Yes	Yes	High
Mak, 2020, 32665188	High	High	N/A	Low	Low	Low	Low	No	Yes	Yes	Moderate
McCarthy, 2014, 24201740	High	High	N/A	High	Low	Low	Low	Yes	Unclear	Yes	Moderate
Merchant, 2015, 26111325	High	High	Low	N/A	Low	Low	Unclear	Yes	Yes	Yes	High
Mioton, 2013, 23562485	High	High	High	High	Low	Low	Low	Unclear	Unclear	Yes	Moderate
Momeni, 2018, 29095189	High	High	Low	N/A	Low	Low	Unclear	Yes	Yes	Yes	High
Naoum, 2020a, 31756414	High	High	Low	N/A	Low	Low	Low	Yes	Yes	Yes	High
Naoum, 2020b, 32607638	High	High	N/A	Low	Low	Low	Low	Yes	Yes	Yes	High
Nasser, 2018, 30204678	High	High	Low	N/A	Low	Low	Unclear	Yes	Yes	Yes	High
Nelson, 2019, 31356276	High	High	N/A	Unclear	Low	Low	High	Yes	Yes	Yes	High
Palve, 2020, 32468337	High	High	N/A	High	Low	Low	Low	Yes	Yes	Yes	Moderate

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Qin, 2018, 29384865	High	High	High	High	Low	High	Low	Yes	Unclear	No	High
Roth, 2007, 17413877	High	High	N/A	Unclear	Low	Low	Low	Yes	Yes	Yes	High
Shiraishi, 2020, 32589082	High	High	Unclear	N/A	Low	Low	Low	Yes	Yes	Yes	High
Simon, 2020, 33363007	High	High	N/A	High	Low	Low	Low	Yes	Yes	Yes	Moderate
Woo, 2018, 30360958	High	High	Unclear	N/A	Low	Low	Low	Yes	Yes	Yes	High
Wu, 2021, 33740204	High	High	N/A	Low	Unclear	Low	Low	Yes	Yes	Yes	High
Xu, 2018, 30261115	High	High	Unclear	N/A	Low	Low	Low	Yes	Yes	Yes	Moderate
Yueh, 2009, 19228537	High	High	N/A	Unclear	Low	Low	Low	Yes	Yes	Yes	High
Zhang, 2019, 30675702	High	High	Low	N/A	Low	Low	Low	Yes	Yes	Yes	High

Abbreviations: N/A = not applicable, NRCS = nonrandomized comparative study, PMID = PubMed identifier.

Ratings are color coded for emphasis only. The colors do not impart unique information.

From the Cochrane Risk of Bias Tool (each item rated as **Low**, **High**, **Unclear**, or **N/A**)

- Blinding of participants (performance bias): Performance bias due to knowledge of the allocated interventions by participants during the study.
- Blinding of personnel/care providers (performance bias): Performance bias due to knowledge of the allocated interventions by personnel/care providers during the study.
- Blinding of outcome assessor (detection bias): Detection bias due to knowledge of the allocated interventions by outcome assessors during the study.
- Incomplete outcome data (attrition bias): Attrition bias due to amount, nature or handling of incomplete outcome data.
- Selective outcome reporting (outcome reporting bias): Bias arising from outcomes being selectively reported based on the direction and/or strength of the results.
- Other BiasStages: Bias due to problems not covered elsewhere in the table.

From the National Heart, Lung, and Blood Institute (NHLBI) Quality Assessment Tool (each item rated as **Yes**, **No**, **Unclear**, or **No Data**)

- Eligibility criteria prespecified and clearly described: potentially related to selection bias.
- Intervention clearly described and delivered consistently: potentially related to performance bias.
- Outcomes prespecified, clearly defined, valid, reliable, and assessed consistently: potentially related to detection bias.

Overall risk of bias assessed as **HIGH**, **MODERATE**, or **LOW**.